Concerning Docket 25-133 "DELETE, DELETE, DELETE"

Two obsolete rules that limit flexibility for a licensee to pick how best to serve their public audience are below;

(1)FM antennas to be licensable must have the highest signal in the Horizontal polarization. This is a holdover from the earliest days of FM broadcasting when the FM receivers mostly shared the home TV antenna which was a roof mounted horizontally polarized yagi. For the last 30 years it has been rare for home listeners to use the horizontally polarized TV yagi antenna for FM reception. There have been situations where multipath has been severe because of large reflective surfaces like Horsetooth mountain just west of Fort Collins, Colorado That made even car radio coverage very spotty from an FM tower site to the east of Fort Collins. Tests found that the industry standard circular polarization made the multipath unbearable while single polarization performed far better with very little multipath evident on the car radios. However car radios with their vertically polarized receive antennas would have had at least 10 dB superior signal if commercial FM stations were allowed to use vertical only polarization. Nearly all portable FM radios have a vertical whip antenna and home console and tabletop radios either have a vertical whip or a random wire antenna (via the power cord or a hank of wire hanging out of the receiver cabinet which is just as likely to be vertically polarized as any other polarization. The requirement for maximum ERP in the horizontal polarization limits the licensee's ability to best serve his listening audience with no other obvious benefit.

(2)Educational FM stations have a horizontal polarized power limitation due to historic protection of ANALOG Channel 6 TV analog aural carrier. As there ARE NO MORE ANALOG Channel 6 TV stations in the US this protection is no longer pertinent. In addition the educational FM stations have demonstrated that FM service with higher Vertical Polarization than Horizontal Polarized signal provides essentially the same real coverage with no obvious penalty. Therefore it should be a decision of the licensee whether to use Horizontal, Circular, or Vertical polarized antennas to best meet the needs of their listening audience.

Respectfully Submitted

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